

# **Research of Precision Employment Service of Chinese College Graduates in the Big Data Era**

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**Abstract:** In the era of big data, the precise employment service in Colleges and universities includes precise grasp of work direction, precise employment work, precise grasp of information, precise docking platform, precise information push and assistance work. Specifically, it includes precise construction of employment service system, precise construction of employment guidance system, precise construction of employment assistance system, precise construction of employment assessment system and so on. In the era of big data, in order to promote the precision of employment work, we should build a data system of precise employment service consisting of basic information system, information analysis system, employment platform system, information linkage system and other subsystems, and strive to enrich the connotation and mode of precise employment service work in the era of big data.

## **1. Introduction**

With the continuous progress of technology and the rapid development of application innovation, big data penetrates into all aspects of social life. On the basis of statistics, analysis, classification, mining and integration of graduate employment data by big data technology, a comprehensive, real, effective management and timely tracking graduate employment platform and management monitoring system are established, so as to accomplish graduates. The information of industry dynamics, contracting status, employment quality and employment status are evaluated systematically and objectively, and the employment market analysis report is formed, which creates conditions for college students' precise employment and realizes high-quality employment.

## **2. Great Data Era Causes Profound Change of Employment Work in Colleges and Universities**

### **2.1. The connotation of employment information in Colleges and universities has been greatly enriched in the era of big data**

Big data has greatly expanded the number of employment and related information that colleges and universities touch in their employment work, as well as the ways of collecting, storing, grasping, fine processing and innovative application of these information. In the era of big data, employment information in Colleges and universities has obvious characteristics: first, regularity. Employment information is regular and can be used to analyze the current situation and predict the future. The second is variability. Employment information is bound to meet the requirements of employment work. The connotation and extension of employment information change with the change of employment work. The understanding of employment work and employment information will also change in different periods. Third, it is normative. The big data of employment information requires the accuracy, process and standardization of the whole process of processing employment information in Colleges and universities. How to effectively grasp and rationally use the massive data is a topic worthy of in-depth study. Fourth, expansion. The purposeless storage of employment information in an effective range is the premise to ensure the follow-up utilization of information. This process means the great expansion of employment information category and the resulting expansion of employment information data by tens of times. Of course, the value that can be

extracted from the big data of employment information will also be greatly enhanced<sup>[1]</sup>.

## **2.2. Extension of Employment Information in Colleges and Universities in the Big Data Era has become more extensive**

### **2.2.1. Big Data of Employment Market Information**

#### **2.2.1.1 Situation and Policy Information**

This kind of information includes three levels: first, the macro level, including the national economic situation, national development planning and other policies, such as the State Council's Opinions on Further Improving Employment and Entrepreneurship under the New Situation and the Ministry of Education's Notice on Improving Employment and Entrepreneurship of Graduates of National General Colleges and Universities in 2018. And so on. Secondly, on the meso-level, it includes policy documents, civil service recruitment policies, recruitment plans for selected students, recruitment information of talent market, relevant innovation and entrepreneurship support policies, such as "Notice of 'Measures for Guangzhou Excellent Graduates' Selection". Thirdly, at the micro level, it includes the information of employment and personnel training in Colleges and universities, such as graduates' departure requirements, employment practice information, award evaluation, vocational education, degree award requirements, training programs, job-hunting lecture information, etc. This is also the kind of job information that students exchange with each other.

#### **2.2.1.2 Employment Unit Class Information**

The information of employing units mainly includes two types: first, basic information of employing units, including name of units, organization code, communication address, contact person and telephone, e-mail, introduction of units, etc. Secondly, the employer's demand information mainly includes recruitment posts, demand specialty, educational level requirements, demand number, salary treatment, job demand and so on.

#### **2.2.1.3 Industry status information**

This mainly includes the development status of the main employment flow of different disciplines in Colleges and universities to the industries involved. For example, the information that the economic trade industry can collect includes the economic trade service industry, the economic trade service policy standards, the development analysis of the economic trade industry, the market analysis of economic trade firms, the economic trade fee situation, the economic trade competition pattern analysis, etc. The "Research Report on the Current Situation and Trends of China's Economic Trade Service Industry 2014-2018" published by China Business Intelligence Network and the "Mid-2015-2020" published by Intellectual Research Consulting. This kind of information belongs to the report on competition status and market prospects of China's economic trade service industry issued by Guangzhou Economic Trade Association.

#### **2.2.1.4 Subject Professional Development Information**

Including the situation of specialty construction, the specific objectives of specialty construction (personnel training, teachers, discipline construction, curriculum construction, social services, etc.), the training plan of specialty talents, the employment situation of specialty, etc<sup>[2]</sup>.

### **2.2.2. Big Data of Training Objects (Students)**

#### **2.2.2.1 Graduates Information**

This kind of information includes students' origin, domicile, internship experience, vocational skills, career aspiration, family economic status, job-hunting ability and so on. For example, in the report of graduates' source information carried out at the end of each year in Guangzhou, the data reported in recent years have added the data of graduates' family financial difficulties and employment difficulties. The collection of these information will facilitate us to grasp the actual employment situation of each student more comprehensively and lay a foundation for the follow-up related work.

#### **2.2.2.2 Student Information**

This is the information recorded from the moment the students enter school. In a narrow sense, it includes the basic family situation, personal situation, academic situation, reward and punishment

situation, and the situation of curriculum refresher. Under the big data thinking, the students' information has been further expanded in a broad sense. It can also include students' consumption (bank card, campus card income and expenditure), accommodation, practice, participation in student association activities, voluntary service, learning and scientific research (library card lending records, library and document inquiry system usage, etc.), interest and love. Good, marital status, etc. The effective collection of these information has laid the foundation for the follow-up analysis and research.

#### 2.2.2.3 Information on previous students

This kind of data mainly includes job position, job industry, job location, salary, job industry conversion, career development, employer feedback and so on.

#### 2.2.3 Big Data of Training Units (Universities)

This kind of data includes the basic situation, supporting policies and employment situation of each training unit (university), such as institution setting, enrollment, training, degree, student work and graduate employment every year<sup>[3]</sup>.

### **2.3. The application of big data in the employment work of colleges and universities plays an increasingly important role, and it also puts forward extremely urgent requirements for the reform of the employment work of colleges and universities**

The application of big data in employment work will effectively promote the development of employment work, enhance the pertinence and individuality of employment service, strengthen employment as an important reference basis for universities to adjust layout, formulate plans, reform teaching and optimize enrollment, and effectively promote universities to better realize the important mission of serving the society. At present, the employment work in Colleges and universities stays at the level of simple information collection and synchronous release, and lacks deep-seated applications such as information analysis, prediction, research and evaluation, and personalized service, which greatly reduces the application value of employment data information. In the era of big data, how to enhance the information value of employment data and improve the quality and level of employment services is an important issue of employment work in Colleges and universities<sup>[4]</sup>.

## **3. New Model of Precision Employment Service in Colleges and Universities in the Big Data Era**

### **3.1. Grasp the New Requirements and Directions of Precision Employment Service Work**

Firstly, we need to issue a special plan for employment precision service in the era of big data, and strengthen policy guidance and support. Implementing "Precision Employment Service" has great practical significance, so we must plan ahead. Our country should publish the strategic plan of big data development at the national level as soon as possible, and examine the new era technology and business model of big data from the perspective of strategic resources, formulate special plans, support and guide. Firstly, we should formulate the development strategy and planning roadmap of employment precision service in Colleges and universities from the level of competent units at all levels. Secondly, colleges and universities should upgrade the employment precision service work to a strategic level and formulate corresponding plans. Second, we need to establish a cooperative mechanism for precise employment services and form a synergetic force. Precision employment service requires higher information processing. Information collection, processing and storage need the cooperation of various departments to form a joint force. Otherwise, big data strategy can only be a scattered sand. Correspondingly, the rapid development of big data technology will also promote the collaborative ability of information processing among different employment information subjects. Using big data to integrate information, the basic information collected by the functional departments of College enrollment, training, study and employment is shared and compared. Through the construction of large data center of employment information in Colleges and universities, the acquisition, screening, collation, organization, analysis and decision-making of

employment data in Colleges and universities are strengthened. Through cloud computing technology, the unified management of employment information data in Colleges and universities is realized, the utilization rate of equipment resources and employment efficiency are improved, and the level of precise employment service is improved<sup>[5]</sup>.

### **3.2. Utilize new resources, tap new values, and find out the focus and new value growth point of precise employment service work**

Faced with the big data of employment information in Colleges and universities, we must dig out the value of big data of employment information in Colleges and universities to meet the needs of the development of the new situation. Standing at the height of strategic resources, we can see the new value of employment information in Colleges and Universities under the background of big data. We should actively seek the mode of cooperation between industry, University and Research on big data of employment information, and find the new focus of precise employment service. Precision employment service needs more resources to support, so it is necessary to activate the existing system through the employment data mining with greater market value and the strength of industry. For example, most graduates of 3-5 years have the need of career transformation and development, and a large number of institutions, enterprises and institutions also have the need for talents in this field. How to collect the supply and demand information through the precise employment service work, and take a reasonable and legitimate commercialization mode, take the lead of the Employment Department of colleges and universities, with the support of trade associations or other organizations, to truly tap the market value of the big data of employment information and build a cooperative mechanism, which is whether the future precise employment service work can go out of school and achieve leapfrog development<sup>[6]</sup>.

### **3.3. Innovating Work Model and Achieving "Supply-side Reform" of Employment Work in Colleges and Universities through Precise Employment**

The Central Economic Working Conference(2018) pointed out that promoting structural reform on the supply side is a major innovation to adapt to and lead the new normal economic development, an active choice to adapt to the new situation of comprehensive national competitiveness after the international financial crisis, and an inevitable requirement to adapt to the new normal economic development in China. On the one hand, since the expansion of College enrollment, the number of college graduates has increased year by year, and the number of unemployed people in the graduation season has increased year by year, resulting in the phenomenon of "difficult employment". On the other hand, in the employment market, especially in the emerging industries, the demand for high-quality talents is hungry, and it is difficult to employ high-quality talents at all costs, but it is difficult to employ them. It is difficult to recruit suitable talents. The coexistence of "employment difficulty" and "recruitment difficulty" for a long time fully reflects that the crux of employment of university graduates and even the whole employment work in China is not on the demand side, not the insufficient effective demand, but the problem on the supply side. It is the unreasonable talent training and employment structure of colleges and universities that leads to the change of the supply structure unable to adapt to the demand structure. Precision employment service work is the solution to this problem. Under the background of big data, the precise employment service can be reformed from the following two aspects: one is to further innovate the precise application of employment data information in Colleges and universities. In the process of collecting employment information, it is necessary to input the data accurately and correctly to ensure the integrity and authenticity of the data information. Employment information, such as policy information and recruitment information, needs to be screened and screened scientifically and not blindly released. In order to ensure the convenience of later data application, it is necessary to classify and manage information. For example, graduate employment information can be classified according to employment area, employment field, job category and so on, and converted into electronic version stored in electronic equipment, using cloud technology for network backup, to ensure information security. Second, we should further improve the fineness of the employment service system in Colleges and universities. Compared with informationization, the process of

data-based employment information pays more attention to innovating service concept and management mode, changing "management-oriented" to "service-oriented", gradually transforming into a "student-oriented" service-oriented system, making better use of informationization means to serve University employment, creating a more efficient and pragmatic employment service system, and improving the level of employment precision<sup>[7]</sup>.

### **3.4. Deeply Developing Technology Research and Development and Expanding New Contents of Precision Employment Service**

At the present stage, the application of employment data still stays on the previous ways and methods, far from adapting to the new situation, new situation and new requirements of university employment work, especially precision employment service work under the background of big data. This requires us to accelerate the pace of policy learning, theoretical research and technology accumulation, keep abreast of the requirements of the times and the needs of reform and innovation, use the new ideas of precision employment service, excavate and make good use of a large number of employment-related statistics accumulated in the long-term employment work, and provide scientific support for the reform and innovation of employment guidance and related affairs. This is the case. We should further develop a data system for precise employment services and enhance the accuracy of employment information processing. In order to realize the precise employment service under the background of big data, it is necessary to integrate the related technologies of identification, collection, storage, analysis and mining, and build the data system of precise employment service according to the whole data collection of employment related groups or objects. Combining with practical work, the author believes that the data system of precision employment service should include at least the following subsystems: (1) basic information system. Mainly is the classification of basic information collection and management, including the employment market, industry positions, employers, graduates (including current and past students) and other information. (2) Information analysis system. The basic information is searched, selected and analyzed by technical means, and relevant analysis reports are generated, including job market analysis, graduate internship employment, career development analysis, etc. (3) Employment platform system. Mainly used for direct docking between the supply and demand sides of employment, including the collection and publication of information on internship employment, the development of internship employment recruitment (online job fairs, etc.), innovation and entrepreneurship guidance, precise assistance and so on. (4) Information linkage system. It mainly realizes the linkage function of data such as graduate information, graduate tracking service information and enrollment and training information, so that employment information can act on the enrollment and training links of colleges and universities through feedback, forming a long-term employment linkage and early warning mechanism. At the same time, we should pay more attention to the training of employment information professionals, strengthen the construction of employment information team, and strengthen the construction of employment information big data risk prevention system, improve risk prevention awareness and ability<sup>[8]</sup>.

## **4. Conclusion**

Using big data analysis technology to mine the value of graduate employment data can improve the fineness of employment services for college graduates, and it is also a new focus of fineness employment services for colleges and Universities under the background of big data. This is an important issue that university managers need to think about from the strategic height of long-term development, and it is also the meaning of doing a good job of employment service for university graduates in the new era.

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